

chosen page to be book marked, therefore allowing for easy reference when “scrolling” through the pages of the e-reader device. Once it is no longer necessary for the user to maintain the book marked page, the book mark symbol may be turned off with a further touch of the page by the user.

[0071] The user may also turn back the pages in case he wants to reread information displayed on a page that he read earlier.

[0072] We also incorporate the driver electronics within the e-reader device which allow each electronic display to turn about the central spinal bind and be able to carry with it, on its rotating element, electronics to send the appropriate signals to the rows and columns of the page display. The driver electronics for each of the display devices, such as the display row and column drivers, are preferably mounted in a fixed position with respect to each of the displays, preferably inside the above-mentioned sleeve part. (Additionally or alternatively some or all of the electronics may be mounted on an electronic page). Referring to FIG. 8, a host module which is running the reader software is also responsible for coordinating the information displayed on the individual page, and is preferably integrated in a fixed position with respect to one of the display devices/pages, preferably located in the central spinal column. The host module also contains most other hardware components, such as, but not limited to the battery, image processing system, common power on/off control, and download capability. The electronics that is local to each of the displays includes the image driver electronics. In embodiments a flexible interconnect cable is present for electronic signal communication between the host module and one or more of the other individual pages/display devices. The flexible interconnect is configured such that it can accommodate the 360 degree turning motion of the pages. Preferably the individual pages are mounted in such a way with respect to each other that it is not possible to turn any of the pages by multiple 360 degree turns with respect to any of the others.

[0073] Alternatively, the host module may be integrated in a fixed position with respect to the central spinal column, but turnable with respect to any of the display devices that can be rotated around the central spinal column. In this case the interconnection between the host module and the individual pages such that it is not damaged by multiple 360 degree turns. For example a wireless link (optical or radio) may be used for interconnecting the different pages of the device with the host module.

EXAMPLE 2

An Electronic Reader which Incorporates at Least Two Double Sided Electronic Pages that are Electronically Refreshed Upon being Turned

[0074] In this example an electronic reader is provided that incorporates two or more double-sided electronic pages bound or otherwise coupled to one another to allow turning. Upon turning each upper page of the e-reader, this page is refreshed, while the user is viewing a subsequent electronic page of the reader. Each double-sided page of the e-reader is bound together around a central spinal column. In embodiments a double-sided page comprises two display devices mounted back to back with respect to each other.

[0075] As is shown in FIG. 9, each page of the device may comprises a double-sided page that is able to be turned in the same way as described above and with reference to FIG. 3. As an upper page 1 of the e-reader is turned about the central

bind, said upper double-sided page 1 refreshes while page 2 and 3 become visible to the user. Both pages will have been updated prior to turning page 1. The user may turn page 1 by 180° only (or less, for example by 90° or more) at first in order to read page 2, and may turn page 1/2 by a further say 180° when (s) he wants to proceed to page 3.

[0076] As described above for the device incorporating single-sided electronic pages, our technology enables this double-sided page refreshing process to occur out of sight from the user due to the fact that the refreshing motion is completed either during the turning motion or soon after the turning of the upper page is complete.

[0077] One significant advantage of incorporating double-sided pages within the device is that in embodiments the user is able to access three consecutive pages at any one time, that is the current page as well as the page before and after the current page. The user may also turn back the pages in case he wants to reread information displayed on a page that he read earlier. Potentially, in embodiments, there are four pages concurrently available: when reading, say, the left hand page if, say, refresh is only performed on completion of a 360° turn then the user has the current page, the page before, the page after (right hand page) and, potentially (if it has refreshed), the page after the right hand page potentially available. Similarly when reading the right hand page two previous and one next page can be available.

EXAMPLE 3

An Electronic Reader which Incorporates Individual Pages which are Detachable from the Main E-Reader Device Unit

[0078] In an additional embodiment, an electronic reader is provided that incorporates two or more user-detachable (and re-attachable) electronic pages. Thus a page may incorporate a physical and electrical connection system that allows the page to be unplugged from (and preferably plugged back into) a reader. Upon downloading the documents information into the host module of the electronic reader, the user is then able to detach a page 1 from the main e-reader unit and share the information that has been downloaded onto said electronic page with a second user. For example, this may be most convenient where two users are interested in separate newspaper articles.

[0079] In FIG. 10, the main unit as seen in FIG. 10 a) is shown with one of the pages detached from the e-reader. This detached page is shown in FIG. 10 b). In embodiments the detached page can be read by a second reader either as a single or a double-sided page.

[0080] According to a preferred embodiment of this aspect of the invention the detachable page is not capable of being updated while being detached from the central spine column. In this case it is not necessary to integrate full image processing functions and power supply onto the detachable page. Nevertheless, it can be advantageous to integrate the row and column drivers of the display onto the detachable page, since this can reduce significantly the number of electrical connections, for example of an edge connector, that are made when reinserting the page back into the central spine column.

[0081] According to another embodiment of this aspect of the invention communication between the detachable page and electronic reader is by a wireless link. Adequate image processing and power supply functions are integrated onto the detachable page, such that the page can continue to be